

### **Amendments to the Claims:**

This listing of the claims will replace all prior versions and listings of the claims in the application:

### **Listing of the Claims:**

1. (Currently Amended) A method, comprising:  
receiving, via an interface, design information representative of a portion of a layer of an object that comprises sub-micron measurement targets from a data store;  
storing the received design information in a database;  
accessing, with a processor, the stored design information;  
processing, with the processor, the received stored design information to provide a large number of measurement targets, wherein a measurement target is a sub-micron area located on the layer of the object and the processing includes determining information that is representative of an object included in the portion of the layer of the object that comprises sub-micron measurement targets; and  
associating, with the processor, target measurement parameters to each of the large number of measurement targets, wherein the target measurement parameters comprise at least one of location information representative of a location of a target measurement on the layer of the object, a measurement field of view, and an electron beam parameter;  
measuring, by a measurement tool, each measurement target of the large number of measurement targets using a target measurement parameter associated with each of the measurement targets; and  
processing, by the processor, the measurement results.
2. (Cancelled)
3. (Currently Amended) The method of claim [[2]] 1 wherein the location information comprises an image of a measurement site that comprises the measurement target.
- 4-5. (Cancelled)

6. (Original) The method of claim 1 wherein the step of associating target measurement parameters comprises determining a presence of a unique feature within a measurement site that comprises a measurement target.
7. (Original) The method of claim 6 wherein the determining comprises processing at least a portion of an image of the measurement site.
8. (Original) The method of claim 7 wherein said processing comprises applying auto-correlation operation.
9. (Original) The method of claim 7 wherein the said processing comprises locating a repetitive pattern.
10. (Original) The method of claim 1 further comprising grouping measurements located within a field of view of a measurement tool.
11. (Original) The method of claim 1 wherein the stage of processing comprising selecting measurement targets associated with optical proximity correction.
12. (Original) The method of claim 1 further comprising measuring the large number of measurement targets, in response to the target measurement parameters, to provide measurement results.
13. (Original) The method of claim 12 wherein the stage of measuring comprises scanning measurement targets with an electron beam.
14. (Original) The method of claim 12 wherein the measurements comprise CD measurements.
15. (Original) The method of claim 12 further comprising processing the measurement results to provide an indication about the fabrication process.

16. (Original) The method of claim 15 wherein the measurement results are compared to previously obtained measurement results.
17. (Original) The method of claim 15 wherein the measurement results are compared to expected measurement results.
18. (Original) The method of claim 15 wherein the processing is followed by providing a graphical display representative of the measurement results.
19. (Original) The method of claim 15 wherein the processing comprises determining optimal design features.
20. (Original) The method of claim 15 wherein the processing comprises processing the measurement results and design requirements of the IC.
21. (Original) The method of claim 1 wherein the stage of measurement comprising a stage of locating a vicinity of a measurement target and a stage of detecting the measurement target by using image processing measures.
22. (Original) The method of claim 1 wherein the stage of providing a large number of measurement targets further comprises locating auto focus targets.
23. (Original) The method of claim 1 wherein each measurement target is associated with an auto focus target.
24. (Currently Amended) A system, comprising:
  - a data store for providing design information representative of a portion of a layer of an object that comprises sub micron measurement targets;
  - an interface, coupled to the data store, for receiving design information representative of a portion of a layer of an object that comprises sub micron measurement targets; and

a database, coupled to the interface and a processor, for storing the received design information;

[[a]] the processor, coupled to the interface and database, for accessing the stored design information, processing the received stored design information to provide a large number of measurement targets, wherein the processing includes the determining information that is representative of an object included in the portion of the layer of the object that comprises sub-micron measurement targets and the measurement target is a sub-micron area located on the layer of an object, and for associating target measurement parameters to each of the large number of measurement targets, wherein the target measurement parameters comprise at least one of location information representative of a location of a target measurement, a measurement field of view, and an electron beam parameter, and process measurement results; and

a measurement tool, coupled to the processor, for measuring each measurement target of the large number of measurement targets using a target measurement parameter associated with each of the measurement targets.

25. (Cancelled)

26. (Original) The system of claim 25 wherein the location information comprises an image of a measurement site that comprises the measurement target.

27-28. (Cancelled)

29. (Original) The system of claim 24 wherein the processor is adapted to determine a presence of a unique feature within a measurement site that comprises a measurement target.

30. (Original) The system of claim 29 wherein the processor is capable of performing said determination by processing at least a portion of an image of the measurement site.

31. (Original) The system of claim 30 wherein the processor is capable of applying an auto-correlation operation during the processing of the portion of the image.

32. (Original) The system of claim 30 wherein the processor is adapted to locate a

repetitive pattern during the processing of the portion of the image.

33. (Original) The system of claim 24 wherein the processor is further adapted to group measurements located within a field of view of a measurement tool.

34. (Original) The system of claim 24 wherein the processor is adapted to select measurement targets associated with optical proximity correction.

35. (Original) The system of claim 24 further comprising a measurement tool adapted to measure the large number of measurement targets, in response to the target measurement parameters, and to provide measurement results.

36. (Original) The system of claim 35 wherein the measurement tool is adapted to scan the measurement targets with an electron beam.

37. (Original) The system of claim 35 wherein the measurements tool is adapted to perform CD measurements.

38. (Original) The system of claim 35 wherein the measurement tool is adapted to locate a vicinity of a measurement target and then to detect the measurement target by using image processing measures.

39. (Original) The system of claim 35 wherein the measurement tool is adapted to locate auto focus targets.

40. (Original) The system of claim 39 wherein each measurement target is associated with an auto focus target.

41. (Original) The system of claim 24 further adapted to send the target measurement results to a measurement tool.

42. (Original) The system of claim 41 further adapted to receive measurement results

from the measurement tool.

43. (Original) The system of claim 42 further adapted to process the measurement results to provide an indication about the fabrication process.

44. (Original) The system of claim 42 further adapted to compare the measurement results with previously obtained measurement results.

45. (Original) The system of claim 42 further adapted to compare the measurement results with expected measurement results.

46. (Original) The system of claim 43 further adapted to provide a graphical display representative of the measurement results.

47. (Original) The system of claim 42 wherein the processor is adapted to determine optimal design features in response to the measurement results.

48. (Original) The system of claim 42 wherein the processor is adapted to determine optimal design features in response to design requirements of the IC.